

REMARKS

Claims 2-6 are pending in this application, of which claims 2-4 are independent. In this Amendment, claims 2-4 have been amended. Care has been exercised to avoid the introduction of new matter. Support for the amendments to the claims can be found in, for example, paragraphs [0038], [0049], and [0064] of the specification.

Claim Rejection under 35 U.S.C. § 112

Claim 4 has been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Previous claim 4 recited “level of advantage on specification” in line 11. The Examiner asserted that “it is not clear about whether specification is encoder’s specification or decoder’s or some standard” (paragraph 2 of the Office Action).

In the present Amendment, the above limitations identified by the Examiner have been deleted from claim 4. Accordingly, the rejection of claim 4 has been rendered moot, and thus withdrawal of the rejection of the claim is respectfully solicited.

Claim Rejection under 35 U.S.C. § 103

1. Claims 2, 3, 5, and 6 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Watkins et al. (U.S. Patent No. 6,507,672, hereinafter “Watkins”).

Watkins does not disclose or suggest an image coding apparatus including all the limitations recited in independent claims 2 and 3. With respect to independent **claim 2**, Watkins does not teach, among other things, that “said reference mode selection circuit sets the reference mode that uses the bidirectional coding when an image represented by the image signal has a

first resolution, and sets the reference mode that does not use the bidirectional coding when the image represented by the image signal has a second resolution which is higher than the first resolution,” recited in the claim.

Regarding the claimed reference mode selection circuit, the Examiner asserted that Watkins discloses that “P frame[] receives a fairly high amount of compression, but B-directional picture[] has the greatest amount of compression and requires both a past and a future references (col. 2, line 27-43)” (the first full paragraph on page 3 of the Office Action). However, the portion of Watkins cited by the Examiner does not teach at least setting the reference mode that uses the bidirectional coding when an image represented by the image signal has a first resolution, and setting the reference mode that does not use the bidirectional coding when the image represented by the image signal has a second resolution which is higher than the first resolution, as claimed.

With respect to **claim 3**, Watkins does not teach, among other things, that “said reference mode selection circuit sets the reference mode that uses the bidirectional coding when the image signal to be coded has a first frame rate, and sets the reference mode that does not use the bidirectional coding when the image signal to be coded has a second frame rate which is lower than the first frame rate,” recited in the claim.

In the Office Action, the Examiner asserted that “Watkins further discloses encoding P and B frames using dynamic search area (Motion search) in order to avoid failure of encoder due to computational load (col. 10, lines 25-46),” and “[b]ut the same goal can be achieved by selecting P and B frames because a B frame has two times more computation for motion vector search than P frames since it has two reference frames instead of one” (the first full paragraph on page 5 of the Office Action). However, the portion of Watkins cited by the Examiner does not

teach, among other things, setting the reference mode that uses the bidirectional coding when the image signal to be coded has a first frame rate, and setting the reference mode that does not use the bidirectional coding when the image signal to be coded has a second frame rate which is lower than the first frame rate, as claimed.

Based on the foregoing, Watkins does not disclose or suggest an image coding apparatus including all the limitations recited in independent claims 2 and 3. Dependent claims 5 and 6 are also patentably distinguishable over Watkins at least because claim 5 includes all the limitations recited in independent claim 2, and claim 6 recites an image pickup apparatus including an image coding apparatus of claim 2. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims and favorable consideration thereof.

2. Claim 4 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Watkins in view of Tan et al. (U.S. Patent No. 6,542,549, hereinafter “Tan”).

Watkins and Tan, individually or in combination, do not disclose or suggest an image coding apparatus including all the limitations recited in independent claim 4. Specifically, the applied combination of the references does not teach, among other things, “said reference mode selection circuit sets the reference mode that uses the bidirectional coding when a bit rate of transferring the image signal to be coded has a first rate, and sets the reference mode that does not use the bidirectional coding when the bit rate of transferring the image signal to be coded has a second rate which is higher than the first rate,” recited in claim 4.

In the statement of the rejection, the Examiner admitted that Watkins does not teach the claimed reference mode selection circuit. However, according to the Examiner, Tan teaches as follows (the second full paragraph on page 7 of the Office Action):

Tan specifically discloses encoder regulating complexity requirements of bitstream in order to ensure decoder conforming to the complexity specification

of the standard without running short of resources (col. 1, line 9-17). So, if it is known that the decoder conforms simple profile at main level which cannot decode B frame (well known in MPEG standard), the encoder should not generate B frames. Or if the decoder conforms main profile at main level, the encoder generates B frame to take advantage of decoder's capability.

However, it is apparent that the portion of Tan cited by the Examiner does not teach, among other things, setting the reference mode that uses the bidirectional coding when a bit rate of transferring the image signal to be coded has a first rate, and setting the reference mode that does not use the bidirectional coding when the bit rate of transferring the image signal to be coded has a second rate which is higher than the first rate, as claimed. Accordingly, Tan does not cure the deficiencies of Watkins.

Based on the foregoing, Watkins and Tan, individually or in combination, do not disclose or suggest an image coding apparatus including all the limitations recited in independent claim 4. Applicants, therefore, respectfully solicit withdrawal of the rejection of the claims and favorable consideration thereof.

Conclusion

In view of the above amendments and remarks, Applicants submit that this application should be allowed and the case passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper,

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including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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